Impact of Financial Deepening and Foreign Direct investment on Economic growth: A Case study of Newly Industrialized Countries

Maria Ali Bucha

Abstract

The main aim of present study is to find a relationship among foreign direct investment and financial deepening on economic growth in case of newly industrialized countries by taking the time spanned from 2000-2014. This study argues that the financial deepening is a necessary condition of foreign direct investment, which plays significant role in economic growth. Existing study further elaborate that organized financial system of the host country is a main reason which attracts foreigners to invest in recipient countries, because through financial system resources are efficiently allocated and absorptive capacity of the host country improves due to foreign direct investment inflows. To analyze empirically panel unit root test is used to check the stationary of the variables by using LL, IPS and ADF test. Results of panel unit root test showed that the variables are stationary at level that's why panel least square are adopted to estimate the empirical results of financial deepening and foreign direct investment growth models. Empirical Results have demonstrated that gross fixed capital formation, inflation, adult literacy rate, life expectancy, trade, domestic credit to private sector, broad money supply to gross domestic product have positive relationship have positive relationship with gross domestic product.

Index Terms— Index Terms— Foreign Direct Investment ,Financial Deepening, newly industrialized countries, profile of NICs, Economic growth, unit rot tests, broad money supply.. Use about four key words or phrases in alphabetical order, separated by commas.

Introduction

In current literature, foreign direct investment has got a lot of intention. Unluckily, the effect of foreign direct investment on economic growth considered more contentious in empirical studies rather than hypothetically. While numerous studies found positive relation between foreign direct investment and economic growth (Moudatsou 2003, Li et al 2005, Merican 2007, Hoang et al. 2010), others states negative relation (Katerina et al. 2004, Louzi et al. 2011) among these factors. Results are not similar because data are taken from different sources and as well as some studies adopt panel technique while others used time series data in his studies. Pradhan (2010) explored a positive relationship between economic growths, financial deepening foreign direct investment.

The main aim of present study is to found a relationship among foreign direct investment and financial deepening on economic growth in case of newly industrialized countries. This study argues that the financial deepening is a necessary condition of foreign direct investment, which plays significant role in economic growth (Darrat et al. 2010 and Torruam et al. 2013). Existing study further elaborate that organized financial system of the host country is a main reason which attracts foreigners to invest in recipient countries, because through financial system resources are efficiently allocate and absorptive capacity of the host country improves due to foreign direct investment inflows.

The purpose of recent study is to reveal the impact of Financial Deepening and Foreign Direct Investment on economic growth in case of newly industrialized countries. Economists and political scientists often used this term of NICS to states a country position among first world categorizations and developing economies. Primary sector (Agriculture) based nations moved toward secondary sector (Industrial). NICS are also known as modern developing countries. Recently newly industrialized countries included Brazil, China, India, Malaysia, Indonesia, Philippine, turkey, South Africa, Mexico and Thailand

Our study is separated in seven different sections. Section 1 consists of Theoretical and conceptual framework. Similarly Section 2 enclosed Empirical

review and Section 3 contained of trends of FDI and FD. Furthermore section 4 which is more important part of this study is data, Model and Methodology. Results and discussions are demonstrated in Section 5. While in the last section which is Section 6 draw a conclusion about financial deepening, Economic growth and foreign direct investment that there is positive relation or negative relation among these described variables.

Conceptual Framework

Efforts have been made to apprehension what establish development of financial system empirically. Commonly, when an economy practices financial deepening, it is obvious that the financial zone of that nation is emerging. Shaw (1974) demonstrated that FD is a term often used by policy makers of economic development. It explained the macro effect of FD on the larger economy. It is also known as liquid money. Over financial deepening also called to an increase ratio of M2/GDP or some price index indicators of FD in economies and amongst the countries. It's also possible that financial market share will be different for different level of FD. Similarly FDI is a process whereby the foreign state takes proprietorship of resources to controlled distribution, production of a firm in recipient's country. An investment containing a long-term association and exhibited a long-term interest and control of parent enterprise in an enterprise resident in an economy other than that of the affiliate enterprise, foreign affiliates or foreign direct investment enterprise (UNCTAD, 1999).

3.2 Studies on Foreign Direct Investment and Economic Growth

In recent era foreign direct investment got a lot of intention which significantly contribute the economic growth of developed and developing economies. Numerous studies found a relationship of foreign direct investment with economic growth, but the question arises what is novelty of this study. After reviewing the past studies we are able to find newness of this study.

Gyapong et al. (1999) investigated bidirectional relationship between economic activity and direct foreign investment by applying Granger causality approach on specific sub-Saharan countries like Ivory Coast and Ghana from 1960-1980.Economic growth of Ivory Coast is enhanced through export where in Ghana economic growth is effected through import substitution but there is also found a lot of conflicts between these results because direct foreign investment is appropriate with trade liberalization which is in fact related to export side but not for market which is locally established and also due to exclusion of necessary variables. Author found that there is positive relation with economic activity and direct foreign investment in case of developing countries.

Hermes et al. (2003) confirmed a nexuses between economic growth and financial development through foreign direct system, using the techniques of random, common constant and fixed effect from the time period of 1975-95 taking 67 countries in which 37 countries(including Latin America and Asia) had a strong financial system where Sub Saharan America financial system is very weak. This study investigated that Human capital, financial developed system and efficient capacity are very important for positive effect of foreign direct system on economic growth.

Moudatsou (2003) find out that in case of EU foreign direct investment have positive impact on GDP directly and as well as indirectly by using simultaneous equation. This study covered the time period from 1980 to 1996. Author stated that foreign direct investment not depend on conditional factors like human capital in case of developed recipient countries. But the effect of foreign direct investment on economic growth is positive in case of small countries of EU. This study revealed that past foreign direct investment has positive relation with economic growth but not in case of current foreign direct investment.

Ahmad et al. (2003) elaborated positive relationship between economic growth and domestic private investment by taking thirty two countries. Govt. expenditure, domestic private investment, labor and foreign direct investment are taken as growth factors.

Cross sectional and pooled time series data are used. Researcher selected production function in his study. The results of this study pointed out that domestic private investment are considered more important than foreign direct investment if balance of payment concept is hold and also that the govt. expenditures are not taken into account in the process of economic growth. Author further found that the labor productivity is very low. Researcher suggested if you want to achieve long run growth then there is a need to permote human capital.

Katerina et al. (2004) found that in case of transitional economies and western European countries foreign direct investment plays no important role when we exclude Bosnia by taking the period of 1995-1999. Bayesian econometric technique was used by taking the sample of 17 transitional economies. A same result was happened when GDP is splitting into two groups one had low GDP and other had high GDP. Researcher further investigated that economic growth can be enhanced through education (human capital) and properly organized financial system.

Li et al. (2005) assessed a positive impact of foreign direct investment on economic growth by taking 84 developing and developed countries. For all samples single equation technique is used for the time period of 1970 to 1999. Similarly for 1985 to 1999 3SLS is adopted for sub samples. Results of this study postulates that the relation with foreign direct investment and economic growth is positive. Researcher found a direct relation between foreign direct investment and human capital while negative relation with technology and foreign direct investment.

Duasa (2007) examined the impact of foreign direct investment on Malaysian's economic growth. Quarter data are selected from 1991: 1 to 2002: 4 for estimation purpose. Toda & Yamamoto and GARCH model are used to check the causality among Malaysian's economic growth and foreign direct investment. After applying the econometric technique of causality the results showed that there found no causality between foreign direct investment and Gross Domestic Product and vice a versa. Where the GARCH model suggests that there is found less volatility between economic growth and foreign direct investment and similar results were conducted for foreign direct investment and economic growth. Researcher dignified that for the stability of economic growth and as well as for foreign direct investment there is a need of well-organized legislation, infrastructure, human capital, modern technology and institutions which plays an important role.

Merican (2007) postulated a positive relationship of foreign direct investment in Indonesia and Malaysia with economic growth. While in case of other two Asia countries Philippine and Thailand there found negative relation with economic growth and foreign direct investment. Domestic investment contributes positively in /Philippine and Thailand rather than foreign direct investment. Time spanned which are taken for this study is from 1970 to 2001. ARDL technique is used in this study. Results of this test showed in four Asian's countries Thailand, Malaysia, Philippine and Indonesia there found long run relationship among domestic capital, export, GDP per capita, human capital and foreign direct investment. Numerically it is showed that if export, foreign direct investment and Domestic investment increased by 1% then 0.3762%, 0.2122 %, 0.1647% raised in Gross Domestic Product per capita.

Pradhan (2010) explored a positive relationship between economic growths, financial deepening foreign direct investment by using the ECM, granger causality test, GRIFs test, LM test, and ARCH test. This empirical study suggested that there is a long run relationship between foreign direct investment, economic growth and financial deepening and also that two way causation between economic growth and foreign direct investment at 1% level of significance and also that there is one way causation between foreign direct investment and

financial development by using the data from 1970-2007.The Study presented that there is long run relationship and these three variables are co integrated in integration of order 1.Researcher said that there is a need of proper and efficient financial system to enhanced economic growth.

Louzi et al. (2011) employed cointegration and error correction model in his study to check the causality between GDP and foreign direct investment by taking the time period from 1990 to 2009 in case of Jordan. Results of this study showed that foreign direct investment does not caused GDP but the inverse is true. Empirical results demonstrated that if 1% rose in foreign direct investment, domestic investment and trade liberalization then 0.155, 0.93 and 0.102 rose in GDP. Results of this study revealed that there found positive relation with trade liberalization and domestic investment with GDP. Author suggested that there is a need of well-developed infrastructure, political stability and human capital to attract foreign direct investment in Jordan.

Ahmad et al. (2012) worn error correction model and co-integration technique to verify either there is any relation between economic growths or foreign direct investment and either have short run or long run relation between these two variables. Growth factors which were taken in this study are labor force, domestic capital (independent variables) and gross domestic product as dependent variable. Results of this study indicated that there is long and short run relationship between foreign direct investment and gross domestic investment and also that domestic capital investment, labor force and foreign direct investment are stationary by integration of order first where stationarity in GDP are found by integration of order second. Author remarks that foreign direct investment and labor force have positive relation with GDP and negative with domestic capital investment. Researcher argument that there is positive relation between political stability and foreign direct investment, so there is a need of proper political system and also improved education system.

Insha (2013) verified a dynamic relationship between economic growth and foreign direct investment by using the Error correction model (ECM) and dynamic ordinary least square (DOLS) techniques. Time spanned which is taking for this type of study is from 1980-2010.Researcher presented a positive relationship between economic growth and foreign direct investment in case of co integration. Author further demonstrated that the elasticity of economic growth with respect to foreign direct is positive say 13% at 1% level of significance and the lagged difference of 3 years is negatively correlated say 7% at 5% level of significance which means that past foreign direct investment had negative impact on economic growth. Where Cusum cumulative test and Cusum cumulative square showed the stability of the model. Author also found that the speed is very low say 3% when the adjustment of Error correction model technique is used.

Agrawal (2015) pointed out a long run relation between FDI and economic growth in case of BRICS economies. This study covered the time period from 1989-2012. Researcher stated long run relationship between FDI and economic growth by applying Pedroni Panel cointegration technique, while found two way causation (As FDI increases then economic growth also increases and a reverse is true) among FDI and economic growth by adopting Granger Causality test. Author argumented that if FDI inflows are caused economic growth then such polices could be needless which attract FDI inflows. Author recommended that for sake of more foreign investment there is a need to explore more sources to achieve economic development.

3.2. Studies on financial deepening and economic growth

Odhiamto (2011) used dynamic granger causality in his study but it is suitable in small sample case so that's why researcher used Trivate causality, by introducing new variable that is foreign capital inflows in his study. Author also used ARDL approach in his study. Philips Peron and Dl-DLS tests are used to check the stationarity of the variables. Results of this study indicated that the relation with economic growth and financial

development is one way. Similarly the relation with foreign capital inflows and financial development is two way. In the last the Author concluded that either there is static or dynamic causality is found there existed positive relation with economic growth, foreign capital inflows and financial development. Time Period which is covered in this type of study is from 1994-2005.

Torruam et al. (2013) gave his views about economic growth and financial deepening taking the data from 1990 to 2011 by using Econometric techniques: Granger causality, Toda & Yamamto non causality, ECM and co integration tests. Results of this study showed a positive and long run relation between economic growth and financial deepening. Granger causality test showed that there exists one unidirectional relation between economic growth and financial deepening. Author recommended that there is a need of efficient financial system which might attract foreign direct investment and also that stable political system plays an important role for the improvement of financial system.

Ghildiyal et al. (2015) asserted long as well as short run relationship among financial deepening and economic growth by using ARDL and ECM technique in case of India. This study covered the time period from 1970-91 to 2013-14. Estimated results showed that the relation between trade and growth is not significant in the long run and also found one way causation among credit to private sector and money supply with economic growth but no causality found in the short run between other variables and economic growth. Between Market capitalization and total trade there found bidirectional causality. While one way causation exist among credit to private sector and money supply. In credit to private sector and market capitalization there also found unidirectional causality where in the short run money supply effect the total trade. Researcher suggested that stock market development also play important role in financial development. Author further argumented credit should be provided to private sector with ease and raise foreign trade.

Kargbo et al. (2015) found positive relation between economic growth and financial sector development. Multiple regression and OLS technique are adopted for estimation purpose. Time spanned of this study is from 2000-2008. Relation with growth and financial development indicate long run equilibrium that found through bank based determinants of financial deepening. Author suggested that for the sake of economic growth financial deepening play important role.

A Profile of NICs

NICS stands for Newly Industrialized Countries. Economists and political scientists often usedthis term of NICS to states a country position among first world categorizations and developing economies. Primary sector (Agriculture) based nations moved toward secondary sector (Industrial). NICS are also known as modern developing countries. Recently newly industrialized countries included Brazil, China, India, Malaysia, Indonesia, Philippine, turkey, South Africa, Mexico and Thailand.

Model, Data and Methodology

Model Specification

Model 1: Foreign direct investment growth model

$$GDPG = \beta_0 + \beta_1 GFCFG + \beta_2 FDI + \beta_3 LE + \beta_4 ALR + \beta_5 TR$$

$$\beta_8 LFPRG + \varepsilon$$

Eq. i

Model 2: Financial Deepening growth model

$$GDPG = \beta_0 + \beta_1 GFCFG + \beta_2 FDI + \beta_3 LE$$

$$\beta_6 INF + \beta_7 LFPRG + \beta_8 M_2 G + \beta_9 DCP + \varepsilon$$

Eq. ii

Model 3: Foreign direct investment and financial deepening growth model

$$GDPG = \beta_0 + \beta_1 GFCFG + \beta_2 FDI + \beta_3 LE + \beta_4$$

$$\beta_6 INF + \beta_7 LFPRG + \beta_8 M_2 G + \beta_9 DCP + \varepsilon$$

Eq. iii

Where:

LE = Life Expectancy

FDI = foreign direct Investment

ALR = Adult Literacy Rate

GDPG = Growth of Gross Domestic Product

M2G = Broad Money Supply to GDP ratio

GFCFG = Gross Fixed capital formation to GDP ratio

DCP = Domestic credit to private sector

GDPD = GDP Deflator

Descriptive Statistics of Foreign Direct Investment and Financial Deepening Growth Models

Descriptive statistics explained Mean, Median, Maximum, Minimum, Standard, Deviation, Skewness, Kurtosis, and Probability of Jarque-Bera Test of LFPR, GDPG, GFCG, LFPR, FDI, LE, ALR, TRADE, INF, M2 and DCP. Probability of Jarque-Bera showed that either distribution is normal or not it depend on the probability, if probability is less than 0.05 than distribution is said to be non-normal, similarly if probability is greater than 0.05 then distribution is said to be normal. On the other hand Skewness shows the lack of symmetry, negative value of Skewness means distribution is negatively skewed and if there is positive value of Skewness than distribution is said to be positively skewed. However kurtosis showed the degree of peakness. If $\beta>3$ than distribution is said to be Leptokurtic, similarly if $\beta=3$ than distribution is said to be Meso-kutric. While if $\beta<3$than distribution is said to be Platy-Kutric.

ISSN 2229-5518

Table 1: Descriptive Statistics Foreign Direct Investment and Financial Deepening Growth Models

	GDPG	LFPR	GFCGG	FDI	LE	ALR	TRADE	INF	M2	DCP
Mean	4.78	61.22	6.41	2.32	69.70	87.14	73.27	6.31	67.51	66.38
Median	4.80	60.40	6.15	2.27	72.14	90.92	56.73	5.32	60.48	39.16
Maximum	14.19	76.30	30.54	5.98	76.70	97.79	210.37	54.40	139.26	160.12
Minimum	-5.70	45.90	-29.97	-1.86	51.56	39.23	22.14	-0.85	25.80	13.45
Std. Dev.	3.25	8.42	7.96	1.29	6.32	11.75	45.16	6.23	30.46	45.05
Skewness	-0.24	-0.02	-0.54	-0.01	-1.50	-2.02	1.47	5.23	0.99	0.53
Kurtosis	3.96	1.84	6.20	2.97	4.60	6.33	4.33	37.19	3.06	1.73
Jarque-Bera	6.74	7.90	66.36	0.01	67.38	160.08	60.71	7456.68	22.78	15.92
Probability	0.03	0.02	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	668.96	8570.50	897.67	324.52	9758.15	12199.08	10258.37	883.45	9451.50	9293.60
Sum Sq. Dev.	1466.91	9866.03	8803.53	232.49	5549.38	19185.91	283473.70	5397.19	128944.70	282161.40
Observations	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00

Source: Author's calculations

Table 1 demonstrates the Descriptive Statistics of selected variables. Mean of GDPG is 4.78 where Standard deviation is 3.25, while variable GDPG is negatively skewed and the value of Kurtosis is 3.96 which is greater than 3 which represent there is Lapto-Kutric distribution. Similarly probability of JB test is less than 0.05 which means there is non-normal distribution. Furthermore LFPR mean 61.22 and standard deviation is 8.42, where Skewness value is -0.02 which represent negatively skewed distribution. However, kurtosis value is less than 3 which intricate Platy-Kutric distribution and the probability of JB test is less than 0.05 which means there is non- distribution. Moreover GFCGG mean is 6.41 and standard deviation is 7.96, kurtosis of GFCGG is Lapto-Kutric and JB test is Non- normally distributed. On the other hand mean of FDI is 2.32 and standard deviation is 1.29 and the sigh of FDI is negative which mean distribution is negatively skewed. Probability of JB test is 1.00 which means there is normal distribution in case of FDI. Mean and standard deviation of LE is 69.7 and 6.32, where LE variable is negatively skewed and there probability of JB test is 0.00 which indicate non-normal distribution. Similarly mean of ALR, TRADE, INF, M_2 and DCP is 87.14, 73.27, 6.31, 67.51, 66.38 and standard deviations 11.75, 45.16, 6.23, 30.46 and 45.05. Where Skewness of ALR, TRADE, INF, M2and DCP is -2.02, 1.47, 5.23, 0.99 and 0.53 which indicate negatively skewed distribution only in case of ALR, while normal distribution in case of remaining variables. However the probability of JB test is ALR, TRADE, INF, M2 and DCP is 0.00, 0.00, 0.00, 0.00, 0.00, and 0.00 which showed non-normal distribution of all these variables.

Correlation matrix of Foreign Direct Investment and Financial Deepening Growth Model

Correlation Matrix showed association among variables. Range of correlation is between +1 and -1. Positive sign of r = +1 means there is positive perfect correlation among variables. Similarly negative sigh of r = -1 means there is perfect negative correlation among variables. However if r = 0 than there is zero correlation between variables. Moreover if the values diverge from zero but less than r = 0.50 than there is weak correlation, although r = 0.50 than this is known as moderate correlation. Furthermore if r=0.70 then there is strong positive correlation among variables. On the other hand if r = - 0.70 then it showed high negative correlation. Similarly if r = -0.50 than it is said to be moderate negative correlation, while r = -<0.50 than its mean there is negative weak correlation among variables.

Table 2: Correlation Matrix of Foreign Direct Investment and Financial Deepening Growth Models

	GDPG	LFPR	GFCGG	FDI	LE	ALR	TRADE	INF	M2	DCP
GDPG										
LFPR	0.22	1.00								
GFCGG	0.77	0.03	1.00							
FDI	0.21	0.37	0.04	1.000						
LE	0.07	0.37	-0.07	0.36	1.000					
ALR	-0.21	0.04	-0.05	0.26	0.200	1.00				
TRADE	-0.02	0.17	-0.10	0.21	0.200	0.19	1.00			
INF	-0.11	-0.35	-0.15	-0.17	-0.04	0.02	-0.29	1.00		
M2	0.03	0.31	-0.04	0.24	0.07	0.10	0.82	-0.33	1.00	
DCP	0.08	0.25	0.03	0.29	-0.25	0.34	0.46	-0.29	0.68	1.00

Source:Author'scalculation

This Table 2 demonstrates the correlation between Variables. Correlation among GDPG and LFPR is weak, while there is strong correlation between GDPG and GFCGG. Where, FDI and GDPG are weak correlated with each other's. However, GDPG and LE are weakly correlated. Furthermore GDPG and ALR have weak negative association. Similarly there is negative relationship between GDPG and TRADE, correspondingly weak negative association between GDPG and INF. In the same way there is highly weak correlation among GDPG and M_2 and also have weak association with DCP and GDPG. On the other hand there is positive perfect correlation among LFPR and LFPR with each other. Contrary, LFPR and GFCGG have weak correlation, while association between LFPR and FDI is positive; where correlation with LFPR and is positive. But LFPR and ALR have highly weak relation with each other, similarly weak relation found between LFPR and TRADE. LFPR and INF are negatively correlated with each other but LFPR and M_2 are positively associated, moreover LFPR and DCP have positive relation. There is positive perfect correlation among GFCGG with itself, but have weak association with GFCGG and FDI, while negative correlation among GFCGG and LE. Likewise GFCGG correlation with ALR, TRADE, INF and M_2 has weakly negative, however high correlation among GFCGG and DCP. Furthermore perfect association among FDI with itself, while the correlation between LE, ALR, and TRADE is strong but found negative with INF. However there is strong correlation among FDI and M_2. FDI is also strongly associated with DCP. Conversely LE has perfect correlation with itself, but have positive with ALR and TRADE, where LE is negatively correlated with INF. Contrary LE has positive association with M_2, while with DCP has negative correlation. Positive perfect among ALR with itself while have positive relation between other variables but with M_2 and INF have very strong. Moreover, perfect correlation found among TRADE with itself, while negative correlation with INF. TRADE and M_2 have high strong correlation with each other but positive with DCP. Furthermore, INF has positive perfect with each other but have negative correlation among M_2 and DCP. Similarly M_2 has perfect with itself but has moderate association with DCP. In the last DCP has positive perfect correlation with itself.

Panel Unit Root Test

To check the stationary of the variables augmented dickey fuller, IPS and LLC test are used. Levine and Li test have two ways fixed effect, one is fixed effect (unit specific) and the other is time trends (unit specific). In this test time lag coefficients are similar and this test also allows heterogeneity. This test is used after the LL test because homogeneous time period are taken for all cross section but in this test criticized same time lag period and also allow heterogeneity. IPS test suggested average Augmented Dickey Fuller test. Normally Augmented Dickey Fuller test is used for the estimation of panel data. Augmented Dickey fuller test is a part of regression equation.

Table 3: Panel Unit Root Test of LLC, IPS and Fisher-ADF Chi-square

Variable	LLC test	Prob.	IPS test	Prob.	Fisher-ADF Chi-square	Prob.
GDPG	-3.63705	0.0001	-2.90120	0.0019	40.1344	0.0048
LFPR	-2.99864	0.0014	24.1551	0.0000	0.81178	0.2085
GFCGG	-3.8474	0.0001	-3.41626	0.0003	45.3557	0.0010
FDI	-3.63723	0.0001	-3.04409	0.0012	41.7723	0.0030
LE	-2.04864	0.0097	4.34407	1.00	37.3250	0.0107

ALR	-0.4566	0.3243	-2.15490	0.0012	27.0810	0.0013	Stationarity
TRADE	-1.01596	0.1548	16.6281	0.0000	18.6056	0.0054	Stationarity
INF	-4.55155	0.0000	-2.87879	0.0020	41.2237	0.0035	Stationarity
M_2	-2.35939	0.0000	11.3402	0.0000	9.82857	0.0000	Stationarity
DCP	-11.5734	0.0000	-3.51857	0.0000	7.66406	0.0000	Stationarity

Source: Author's own calculations

Results of panel unit root test are presented in Table 3. This Table reveals that Levine, Li and Chu, Im Pesaran and Fisher-Augmented Dickey fuller tests are used to check the stationary of the variables by using eviews software. Results of all these three tests of unit root indicate that the dependent variables GDPG is stationary at level. Similarly stationary is found in LFPR by using all three tests mentioned above. Furthermore there is zero order of integration in case of GFCGG and FDI. Although variable, LE is stationary in LLC and Fisher-ADF test but is not stationary in IPS test. Moreover ALR is also stationary with 1(0) using LLC, IPS and Fisher ADF test. Likewise stationary is found in TRADE with zero order of integration in all these tests. Where's in all three tests of unit root stationary is found in INF. In the same way Stationary is also found in M_2 and DCP.

Individual Effects

Individual effects can be checked through cross section, period and cross section/period. These types of individual effects are divided into further three types: random, fixed and none. If the probability is less than 0.05 than random effect is used and in this case we reject the null hypothesis and accept the alternative hypothesis. Similarly if probability is greater than 0.05 than we accept the null hypothesis and reject the alternative hypothesis which means fixed effect is used.

Table 4: Individual Effects of Foreign Direct Investment and Financial Deepening Growth Models

Models	Effect Test	Statistics	d.f.	Prob.
Model 1	Cross-section F	9.596637	(9,123)	0.0000
	Cross-section Chi-square	74.468435	9	0.0000
Model 2	Cross-section F	7.215423	(9,122)	0.0000
	Cross-section Chi-square	59.746442	9	0.0000
Model 3	Cross-section F	7.593091	(9,121)	0.0000
	Cross-section Chi-square	62.683921	9	0.0000

Source: Author's calculations

Table 5.2 elaborates the results of individual effects of all three models. In 1st Model, null hypothesis of redundant fixed effect is rejected and alternative hypothesis is accepted which means random effect is used. Similarly alternative hypothesis is used in Model 2, because redundant fixed effect is rejected. That's why random effect is used in second Model. Moreover, Model 3 of individual effect showed that redundant fixed effect is rejected and random effect is accepted.

Hausman Test

Hausman test was developed in 1976. If problem occurred for the selection of period and cross- section then Hausman test is used to solve this problem. This is demonstrated with the help of Table 6.5.

Table 5 Hausman Test of Foreign direct investment and Financial Deepening Growth Models

Models	Test summary	Chi. Sq. statistics	Chi-sq. D.f	Prob.
Model 1	Cross-section random	9.476208	7	0.02202
Model 2	Cross-section random	17.151965	8	0.0386
Model 3	Cross-section random	68.337823	9	0.01200

Source: Author's calculations

In Table 5 Hausman Test of foreign direct investment growth model, financial deepening growth model and foreign direct investment and financial deepening growth model are presented. If probability is less than 0.05 then cross section random test is used and cross section fixed test is used when probability is greater than one. Probability is 0.02 which is less than 0.05 that's why cross section random test is used in all three models.

Panel Results of FD and FDI Models

In Table 6.6 there are four columns and 11 rows. In first column variables are specified, similarly in second column Model 1 is defined with dependent variable GDPG. However, third column elaborate the model 2 and there GDPG is also used as a dependent variable. Moreover in model 3 GDPG is also used as a dependent variable.

In column 1, variable LFPR is specified which is defined as; with age 15-24 that is economically active proportion of population: all people supplying labor for goods and services in a specified period.Net change in level of inventories+ expenditure on fixed investment). Sign of LFPR is positive with GDPG. As LFPR increase than they are able to produce more than that they produce before by employing low LFPR. That's why country production capacity increases, as production capacity increases than not only domestic demands fulfilled but surplus can be exported to get new machinery. If, 1% increases in LFPR then GDPG raises 0.0197%. Pervious study also found a positive relation with labor and GDPG (Javed et al. 2012 and Ahmad 2003).

Now next variable is GFCGG which is defined as net change in level of inventories plus expenditure on fixed investment. Sign of GFCGG is positive with GDPG. If 1% increases in GFCGG than 0.274%, Change occurred in GDPG. GFCGG/GDP Positive relationship found between in the long run (Merican2009, Akomolafe2014, Javed et al.2012, and Maji et al.2011).

Turning to next variable that is FDI and it is explained as: a company must hold 10% shares of foreign firms. Holdings of 10% stocks does not means that to capture investors interest but in-fact possession of assets means better and significant impact on policies, managements and operations. And if company does not have enough capital (10%) then it must have to increase their capital stock (IMF). FDI = (Long term capital +equity capital +short term capital+ reinvestment of earnings)/GDP. Sign of FDI with GDPG is positive in current study. Sign of FDI is positive with GDPG In case of Malaysia relationship between FDI and economic Growth is positive (Merican2009, Carp et al. 2013., Maji et al. 2011, Ajudua 2015, Ahmad et al. 2003 and Gudaro 2012). Similarly (Akomolafe 2014) also found a positive relationship with FDI and GDPG. Foreigner's made investment in the host country, after that investment they introduced new machinery in agricultural as well as in industrial sector. So, both of primary and secondary sectors developed. FDI play significant role, not only to enhance physical capital; through modern machinery, new methods of production like fertilizer, pesticides and seeds, but also helpful to enhance the knowledge of recipient countries. Through FDI host country are now able to know about new machinery, managements methods etc. host nation's now

have more opportunities which caused to raise their income, which actually caused to raise their standard of living. As income rises than domestic nation have able to get higher education in science as well as in social subjects. More income means better health facilities which further contribute to GDPG because healthy peoples have more power and willing to work.

Life expectancy is described as: life expectancy at birth point out the number of years a newborn baby would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. Sign of LE is positive with GDPG If 1% increases in LE than 0.036%, change occurred in GDPG.

Furthermore ALR is specified in first column. Adult literacy rate is defined as: percentage of people's which lies between 15 and above, which are able to write, read and understand the meaning of their routine life. Positive sign of ALR shows that ALR and GDPG have positive relation with each other. As adult literacy have more knowledge than they contribute positively in GDPG because they are able to discover and manipulate new resources. Similarly they are able to find new ways of knowledge. Educated peoples perform their day to day activities truthfully. Estimated results indicate that if 1% increases in ALR than GDPG rise 0.035%. Other study also states positive relation with GDPG and ALR (Merican, 2009).

Table 6: Estimated Results of Foreign Direct Investment and Financial Deepening Growth Models

Variables	Model 1 Dependent variable GDPG	Model 2 Dependent variable GDPG	Model 3 Dependent variable GDPG
C	0.321251 (0.9383)	-1.735432 (0.6017)	1.113176 (0.5307)
LFPR	0.019674 (0.5674)	0.048836 (0.1163)	0.052273 (0.0053)
GFCGG	0.274279 (0.0000)	0.279652 (0.0000)	0.314903 (0.0000)
FDI	0.419423 (0.0045)	---------	0.354871 (0.0019)
LE	0.036332 (0.5288)	0.076291 (0.0394)	0.080906 (0.0043)
ALR	0.034959 (0.0940)	0.039900 (0.0802)	0.099782 (0.0000)
TRADE	0.012776 (0.0573)	0.018231 (0.0344)	0.013803 (0.0101)
INF	0.015747 (0.3783)	0.018153 (0.3894)	0.069337 (0.0022)
DCP	---------	0.012629 (0.2783)	0.021838 (0.0000)
M_2	---------	0.035530 (0.0818)	0.032884 (0.0008)

Source: Author's Calculations

Although, next variable is TRADE which is described as: summation of import and export over GDP is called trade. Both the nations gain from trade either one have inferior technology or other have superior technology. (Ricardo 1968s). Sign of TRADE is positive with GDPG. If 1%

increases TRADE 0.035% rises in GDPDE is positively related with GDPG (Yanikkaya 2014).

Now, turning to next variable; that is INF. In this study we used GDP deflator, where GDPD =GDP Current currency/GDP constant currency, where base year may be different for different countries. Sign of INF is positive with GDPG. If 1% increases in INF; than 0.016% raised in GDPG. Other study is also in favor of current study (Malik et al. 2001). Increase in INF means persistent rise in gernal price level, as price raises production of that good increases whose price increase. More production means more revenue generate through production. Producers are well off because they got now more profit as compared to low inflation. Profit is than reinvested to further production which not only caused to increase surplus but profit can be double to exports surplus in foreign markets.

Financial corporations provide finance to the private sector in the form of loans, trade credits. Sign of DCP is positive. If 100% change occur in DCP than GDPG rises by 0.012629%.Other study also found a positive relationship among DCP and GDPG (Onuonga 2014). As DCP increases than more capital is available for investment purpose; more investment means further employment opportunities which caused to raise income level, higher level of income means high standard of living. High standard of living instigated more health facilities that are why peoples have more power and willing to work which in fact not only caused level of increase but production is also increased. Furthermore increase in production caused to not only fulfilled domestic demand but surplus is exported which further generate capital.

Sum of COB + DD other than those of the central government+ the time+ savings+ foreign currency deposits of resident sectors other than the central government + bank and traveler's checks + and other securities such as certificates of deposit and commercial paper. Positive relationships found between M_2/GDP with GDP in the long run (Merican2009 and Akomolafe2014).If 1% increase in M_2, than GDPG raise 0.035530%. Rise in broad money supply is positive correlated with gross domestic product: as money supply increased than more money is available for investment purpose which cause to generate more production. Further labor needed to produce more goods and services which mean employment is also positively correlated with the rise in money supply; additional labors are able to produce extra goods which generate large amount of capital through export of surplus production. Additional capital is earned through an export, that's why it's showed that M2/GDP is positively correlated with gross domestic product.

Conclusion

The main aim of present study is to find a relationship among foreign direct investment and financial deepening on economic growth in case of newly industrialized countries. Recently newly industrialized countries included Brazil, China, India, Malaysia, Indonesia, Philippine, turkey, South Africa, Mexico and Thailand. This study argues that the financial deepening is a necessary condition of foreign direct investment, which plays significant role in economic growth. Time spanned of current study is from 2000 to 2014. Objective of this study is to examine the role of foreign direct investment on economic growth. Another objective of this study is to analyze the role of financial deepening on economic growth. To investigate these objectives empirically, panel unit root tests are used to check the stationary of the variables by using Levine and Lin, Im, Pesaran and Shin and Augmented Dickey Fuller test. Results of panel unit root test showed that the variables are stationary at level that's why panel least square are adopted to estimate the empirical results of financial deepening and foreign direct investment growth models. Empirical Results have demonstrated that foreign

direct investment is positively correlated with gross domestic product. Similarly Broad Money Supply to Goss Domestic Product also has positive relation by gross domestic product. Furthermore Domestic credit to private sector has positive impact with gross domestic product.

Policy Recommendation

- FDI is a foundation of strategic component of investment, its sustained development and economic growth. FDI is compulsory for jobs creation, expansion of development and standing of manufacturing industries of the new one.
- Indeed, it is also required in the education, healthcare, R&D, retailing, infrastructure and in long term financial projects. So, the study mentions the following ideas:
- The study needs the policy makers to focus more on interesting various types of FDI.
- The policy makers should plan policies where foreign investment can be exploited as means of augmenting domestic production, exports and saving; as medium of technical learning and technology circulation and also in providing admittance to the external market.
- It is advocated that the government should drive for the immediate progress of infrastructure sector's supplies which are significant for modification of business activities.
- Government should certify the impartial distribution of FDI inflows between states.
- The central government must provide more independence to states, so that they can invite FDI inflows at their own level. The government should also deliver extra incentives to foreign investors to invest in states where the level of FDI inflows is relatively low.
- Government should exposed accesses to foreign companies in the export – oriented facilities which could increase the demand of untrained workers and low expert services and also raise the wage level in these services.
- Government must goal at interesting definite types of FDI that are able to create spillovers impact in the inclusive economy. This could be succeeded by investing in infrastructure, R&D activities, human capital, and environmental issues, productive capacity, dynamic products, and sectors with high income elasticity of demand.
- Through absorptive capacity and by productive capacity development process take place in the economy, that's why government should take steps to permote such policies which caused economic development.
- It is proposed that the government effort should be on the kind and capacity of FDI that will expressively increase local competitiveness, improve skills, technological knowledge and invariably leading to both social and economic gains.
- It is also recommended that the government must endorse ecological development through FDI by further reinforcement of political involvement of people and by ensuring personal security of the citizens 'health, education and R&D system.
- Finally, it is suggested that the policy makers should ensure optimum utilization of funds and timely implementation of projects. It is also observed that the realization of approved FDI into actual disbursement is quite low. It is also suggested that the government while pursuing prudent policies must also exercise strict control over inefficient bureaucracy, red - tapism, and the corruption, so that investor's confidence can be maintained for attracting more

- Government need to pay devotion to the unindustrialized Asian zone as the innovative m economic power – house of business transaction and try to raise the trade indoors this region through multilateral agreements, bilateral, and also concludes FTAs with the developing economic Asian colossuses.

- Government need to pay devotion to the unindustrialized Asian zone as the innovative m economic power – house of business transaction and try to raise the trade indoors this region through multilateral agreements, bilateral, and also concludes FTAs with the developing economic Asian colossuses.

- Last but not least, the study proposed that the government make certain FDI quality rather than its magnitude.
- First, countries adopt sound financial liberalization, as financial deepening was seen to be growth enhancing. This is necessary since the financial industry thrives on credibility. Hence, safety and soundness of the financial industry is necessary to ensure high consumer confidence.

The study, therefore, endorses a uniformed policy technique that also anticipates other fundamental factors such as attitudinal reforms, political stability, and responsible leaderships. Future studies could emphases the causal relationship between growth and these factors. References

1) Gyapong, A., O., & Karikari, J., A., (1999), Direct Foreign Investment Strategies and economic Performance, Journal of economic development, 24.

2) Ahmad, E., & Hamdani, A., (2003), the role of foreign direct investment in economic growth, Pakistan Economic and Social Review, I (1, 2) 29-43.

3) Moudatsou, A., (2003), Foreign Direct Investment and Economic Growth in the European Union, Journal of Economic Integration, 18(4), 689-707.

4) Hermes, N., & Lensink, R.,(2003), Foreign direct investment, Financial development and economic growth, the Journal of Development Studies, (38).

5) Katerina, L., & John, P., & Athanasios, V., (2004) Foreign Direct Investment and Economic /Growth in Transition Economies, South Eastern Europe Journal of Economics, 1, (97-110).

6) Li, X., & Liu, X., (2005), Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship, World Development, 33(3), 393-407.

7) Duasa, J., (2007), Malaysian foreign direct investment and economic growth: Does stability matter? Journal of Economic cooperation, 28(2), 83-98.

8) Mercian, Y., (2009), Foreign Direct Investment and Growth in ASEAN-4 Nations, International Journal of Business and Management, 4(5).

9) Pradhan, R., P., (2010), Financial Deepening, Foreign Direct Investment and Economic Growth: Are They Co integrated, International Journal of Financial Research, 1(1).

10) Odhiamto, N., M., (2011), Financial Deepening, Capital Inflows and Economic Growth Nexus in Tanzania: A Multivariate Model, J Soc. Sci., 28(1): 65-71.

11) Louzi, B. M., & Abadi, A., (2011) the impact of foreign direct investment on economic growth in Jordan, IJRRAS 8 (2).

12) Ahmad, N., & Hayat, M., F., & Luqman, M., Ullah, S., (2012), The causal links between foreign direct investment and economic growth in Pakistan, European Journal of Business and Economics, 6.

13) Insha, B., (2013), foreign direct investment inflows and economic growth in Pakistan: An Application of cointegration and VECM approach interdisplinary, international journal of contemporary research in business, 5(12).

14) Torruam, J.T., & Chiawa, M.A. & Abur, C.C., (2013) Financial Deepening and Economic Growth in Nigeria: an Application of Cointegration and Causality Analysis, 3rd International Conference on Intelligent Computational Systems (ICICS'2013), 29-30.

15) Levin, A. and C.F. Lin (1992) 'Unit Root Tests in Panel Data: Asymptotic and Finite

16) Sample Properties', University College of San Diego Working Paper no. 92-3.

17) Levin, A., C.F. Lin and C.S. Chu (2002) 'Unit Root Tests in Panel Data: Asymptotic a11d
18) Finite Sample Properties', Journal of Econometrics, 108, pp. 1-2'1.

19) Yartey, C. A. (2007). Well-developed Financial Intermediary Sector Promotes Stock Development: Evidence from Africa. Journal of Emerging Market Finance 6(3), 269-8.

20) Yanikkaya, H., (2003), "Trade openness and economic growth: a cross-country empiricalInvestigation", Journal of Development Economics, 72, 57-89.

21) Malik, G. and Chowdhury, (2001), Inflation and Economic Growth: Evidence from Four South America Countries, Asia Pacific Development Journal, 8(1), 123-133

22) Mohan, R., (2006). 'Economic Growth, Financial Deepening and Financial Inclusion'

➢